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Bodily posture in gynecology.



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IN

GYNECOLOGY.

BY

S. J. DONALDSON, M.D.,

NEW YORK.

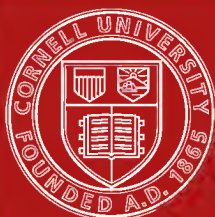
(WITH SIX ILLUSTRATIONS.)

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BODILY POSTURE IN GYNECOLOGY.

THE subject here presented for consideration will probably appear to many as somewhat commonplace in this age of emulation, when every physician seems imbued with the desire to discover and develop something new or startling in the realm of medicine. From the pressure of this ambitious striving, however, it may not be altogether profitless to turn aside for a little wholesome reflection upon the more rudimentary matters connected with our profession. Indeed, it is the prime object of this paper to direct attention to the unfortunate fact that there is everywhere manifested a disposition to repose overweening confidence in the efficacy of art methods, while the natural principles, which constitute the foundation and framework of sound philosophy in therapeutics, too often lie neglected at the very threshold of our endeavors.

"Bodily Posture in Gynecology" has been chosen to illustrate the desirableness of correctly appreciating the value of simple practicalities, for several important reasons. In the first place, it has a wide range of applicability, and as a factor in the modification of physical conditions is unsurpassed by any other silent natural force. Notwithstanding this fact, the principle involved is usually overlooked, and is rarely correctly applied by the profession in the management of bodily ailments. Again, the development of our argument will reveal that,

owing to physiological peculiarities and the environments of custom, posture affects most profoundly the physical condition of women, in whose interests this article is more especially contributed. Despite boasted attainments, long experience, and unlimited opportunity for observation, we are still confronted with the stubborn fact that the ordinary pelvic disorders, by which so much of the happiness of women is destroyed, still resist our most approved therapeutic measures.

The reason for this grievous non-success has been attributed to various causes. Mode of dressing, fashionable follies, injurious habits, lack of exercise, living in vitiated atmosphere, are all cited as opposing influences. While we may not refute the accusation that many of the ills peculiar to women are engendered and perpetuated by vicious practices, wilfully persisted in through foolish pride and inborn caprice, still we insist that physicians have never fulfilled their plain duty in the matter. It is probable that not one woman in a thousand has any definite idea of the manner in which the wearing of high-heeled shoes works mischief within the pelvis, or can advance an intelligent explanation of the harmfulness of habitually assuming the dorsal position when reclining.

The universal ignorance upon these and similar hygienic points surely reflects discredit upon those whose business it is to enlighten the people concerning sanative influences. Physicians are not only negligent in these matters, but not unfrequently inculcate hurtful practices by exacting obedience to measures which are in direct violation of physiological principles, as for instance: women convalescing from parturition, or those undergoing treatment for pelvic diseases, are very commonly directed to "lie on the back" for a stated period, more or less protracted. A moment's reflection would reveal to the physician his mistake, but it is the lack of timely reasoning that permits and establishes this and many other professional shortcomings. Posture has always been recognized as a valuable remedial adjuvant in the department of surgery, but in the practice of gynecology, where the principle manifestly predominates as an originating, perpetuating, and an available curative factor, it is very imperfectly appreciated, if not completely ignored. No fact is more patent than that fluids invariably seek the lowest part of a receptacle. The law

of hypostasis, exemplified in everything around us, holds equally good within our bodies. The speedy gravitation of vital fluids to the most pendent part may be readily demonstrated by holding the head or hands below the heart's level. The veins become distended, the surface assumes a livid hue, and a sense of fulness and discomfort pervades the depressed part. Upon elevation, the temporary hyperemia immediately disappears. Every one has experienced the discomfort of sitting or standing motionless, which shortly becomes so unbearable as to force a change of position. The upright or sitting posture may be maintained for a considerable time without any sense of fatigue, so long as the muscles are in a state of alternate contraction and relaxation. Many women can walk or ride horseback for hours without weariness who could not stand passively five minutes with comfort. The explanation of this necessity for motion is readily found in physiology. We know that the arterial blood is forwarded to its destination through the vis a tergo of the heart's action and the rhythmic contractions of the arteries. On the efferent side, the veins are passive vessels, and the return of blood to the heart is accomplished, in a great measure, through the peripheral pressure exerted upon their walls by the intermissive action of the muscles which they traverse; hence it is that the effete cell-product and impure blood is forced from the tissues, propelled to the lungs, and the elimination of poisonous properties is accomplished chiefly through exercise. The demand for action then, when the upright position is assumed, is as imperative as respiration.

Through inaction and gravitation combined, the tissues are soon loaded with noxious matter, which condition, if prolonged, invariably results in textural disintegration. A very common illustration of this process is witnessed in varicose veins in the legs of persons whose calling necessitates long standing with restricted motion. The visible product of blood stasis in superficial parts indicates that the evil wrought in hidden tissues (other things being equal) will be in proportion to their vascularity and non-resistance.

In recognition of these natural laws, massage, passive motion, and elevation of a diseased member are well-known in surgery.

While blood stasis has long been accounted the chief complicating and perpetuating factor in pelvic disorders, it is surprising that the conditions inducing passive hyperemia have received so little attention, especially when statical influences can be so readily utilized as valuable ameliorating and curative means, simply by modifying the respective relation of the body and heart to the centre of gravitation. In texture, function, and position, the female generative apparatus is peculiarly predisposed to the development of hyperemic processes. The uterus and its appendices abound to a remarkable degree in a network of tortuous valveless veins, and the areolar tissue surrounding these organs and filling the pelvic interspaces is virtually a mass of delicate blood-vessels. In other dependent portions of the body, the comparatively dense textures through which the veins ramify afford material support to the walls of the blood-vessels, whereas the spongy tissues of the pelvis offer but slight resistance to the dilatation of the intercurrent blood-vessels. Consequently, when excen-tral force is unduly exerted within them, their parietes readily expand, and if this strain be prolonged, there is a progressive increase of calibre, thinning of the walls, with the textural impairment which blood stasis entails.

Beside the gravitatory influences (about to be considered), these parts are subjected to oft-repeated physiological engorge-ments—periodic and incidental—to which it is here necessary only to allude, but nevertheless they deserve recognition in the management of all pelvic infirmities. The female pelvis then may be regarded as a remarkably vascular reservoir in which there is a perpetual ebb and flow of blood, the fluctuations ever varying with physical and mental states, and largely modified by bodily posture. It is also well to note that the channel of egress (the vena cava) lies between the abdominal viscera and the dorsal wall. Having thus briefly referred to these cardinal points, let us proceed to consider more particularly under what conditions and in what manner posture directly affects the well-being of women. There are two positions and conditions of the body common to mankind, the erect or active, and the horizontal or passive, with their various modifications. As in the horizontal position activity is con-travened, so in the upright is passivity forbidden. These

familiar facts are based upon explicable and natural laws which underlie our physical and mental welfare. In common with all voluntary operations, there is a right and wrong method of posturing the body. Weariness compels us to seek rest, and we recline. What then is the correct posture to be assumed during recumbency? In the cattle resting in the fields, or the savage sleeping on the plain, we have our answer. A healthful, unrestrained infant in its crib voluntarily lies prone or semi-prone until taught by meddlesome adults to lie on its back.

After what has already been intimated regarding the circulation, further comment to show the evils of supineness would seem unnecessary, but for the sake of greater clearness we will again revert to anatomical illustration. The posterior wall of the truncal cavity presents two antero-posterior curves. The lower begins to recede about the second lumbar vertebra, and when reaching the sacral prominence dips abruptly backward, forming the solid dome sheltering the deep recess in which are situated the pelvic organs. As this pelvic alcove is situated wholly behind the plane of the dorsal floor, it is evident that it becomes a receptacle for the gravitating fluids of the body when the dorsal horizontal position is occupied. If the couch be yielding, the pelvis (the weightiest portion of the female body) sinks still lower, thereby increasing the hypostasis. Furthermore, when we consider that the course of the vena cava is behind the abdominal organs, it is plain that their weight pressing upon this vessel adds to the accumulation of blood within the pelvis by impeding its egress. Superadded to the turgescence, we have the bladder and other superstructures gravitating directly into the pelvis, and crowding the uterus and ovaries downward and backward. It is also well to remember that blood stasis is directly favored by inaction and textural relaxation, consequently the process is more in force during sleep.

It is hardly necessary to state that all this evil is remedied by placing the body in the prone or semi-prone position. When this is done, the blood flows out of the pelvic basin as naturally as fluids leave an inverted vessel, while the uterus and adnexa fall forward upon the cushiony bladder, and gravitate toward the umbilicus. Nor are the advan-

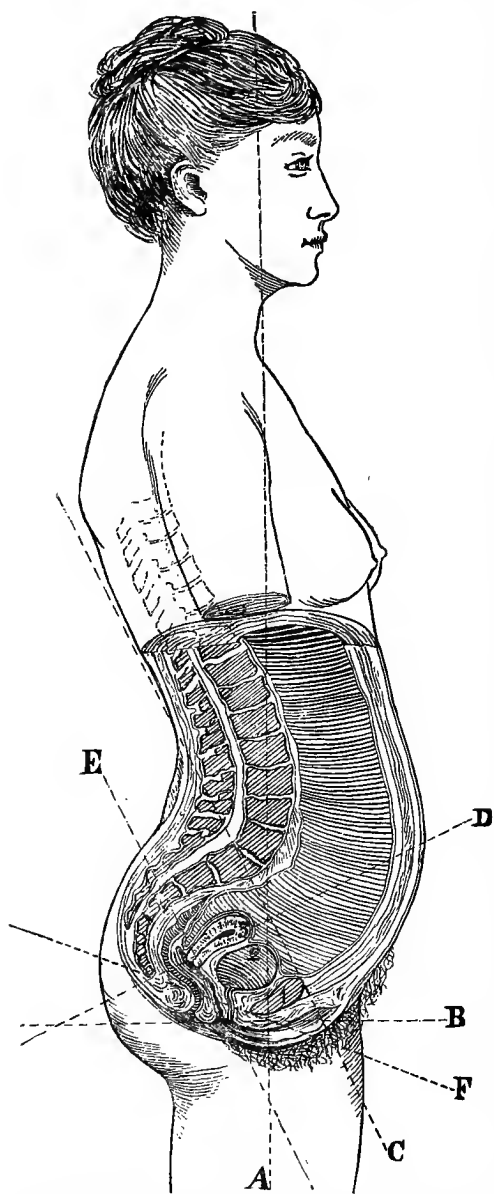


FIG. 1.—Schematic view of female body, illustrating its axial relations.

A, Axis of body; B, plane of horizon; C, plane of pelvic inlet; D, pelvic axis; E, vaginal axis; F, plane of pelvic outlet; 1, pubic symphysis; 2, bladder; 3, uterus.

tages gained from the semi-prone position confined to the pelvic structures alone, for the healthful activity of all glands and organs throughout the body is likewise greatly modified by posture. Every anatomical feature of the human economy plainly indicates Nature's purpose in this particular. The surface of the pliable anterior wall of the body is supplied with a deep layer of adipose tissue, which affords not only an elastic cushion, but is an admirable non-conductor of cold and dampness. The anterior structures are also comparatively free from blood-vessels and nerves, give no attachments, nor are they closely related by contiguity to any vital organ. On the other hand, the posterior surface is meagrely supplied with fat, and abounds in rigid pro-

minences. The deeper structures, besides containing the spinal cord, numerous important plexuses of blood-vessels and nerves, are intimately associated with, and give attachments to the chief glands and organs within the body. A little reflection will show that all these structures are favorably positioned for the performance of their various functions by proneness, while supineness exerts an opposite and harmful effect. How unsightly an object is a heavy sleeper lying on the back—the distended jaws, parched mouth, stertorous breathing, muscular twitchings, nightmare, and sensation of weariness upon awaking, all protest against this position, as unnatural and unhealthful a one for human beings as it would be for quadrupeds. We all know how strikingly the various anatomical structures in quadrupeds ^{pedis} resemble analogous parts in the human body, and we assume that these correspondent structures, alike in form, distribution, relationship, and function, must necessarily be subject to the same natural laws relative to bodily posturing.

The sitting attitude next demands our attention. It would seem as though the household appointments and senseless fashions of the present age have directly conspired against the physical happiness of women, and we have no hesitation in asserting that the modern chairs and sofas have contributed much to the rapidly increasing afflictions of the sex. To sit correctly, the body should be erect and firmly poised without the aid of any artificial lateral or dorsal support. When the equipoise of the trunk is properly maintained the muscles are in a state of equal compensating tension, the graceful curves of the body are preserved, healthful circulation progresses, the axis of the body is perpendicular, the plane of the pelvic inlet sustains its normal angle, and the abdominal structures are not only buoyed up through pervading resiliency, but have their centre of gravitation in front of the pelvic inlet upon the pubic bone and elastic abdominal wall. A backless stool of the proper height is unquestionably best constructed for the adoption of this attitude. If a back must be added, let it be perpendicular and simple as those used by our grandmothers, who in this matter at least lived more wisely than their descendants. A seat with a back, especially if it be sloping, invariably invites the occupant to recline, and in this way the evil-working habit of lolling is

established, and the healthful erect attitude becomes distasteful. Indeed, so exceptional is the correct method of sitting that it is looked upon with surprise, or as something ridiculous and not to be encouraged.

Let any one study the position of the woman of to-day, as she falls a limp inert mass into one of these modern cushioned abominations. Half reclining, half sitting, she drops into a

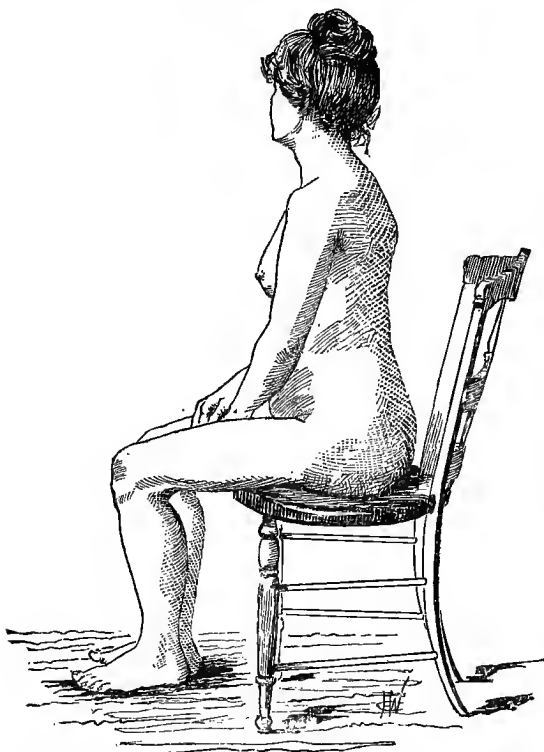


FIG. 2.—Correct sitting posture, the centre of visceral gravity being in front of the pelvic structures.

position than which it would be impossible to find one more injurious to the pelvic structures. The pelvis is advanced and so tilted that the plane of its inlet is horizontal, and into its cavity the superimposed structures gravitate. Not only do the abdominal viscera and relaxed abdominal wall press downward into this cavity, but a woman's garments are so constructed and adjusted as to greatly increase the crowding of these weights

into the pelvis. It should be remembered that the size of the waist is considerably increased by the body sitting limp and crumpled, and therefore it follows that the pressure of the clothing, which may be insignificant when the person is properly erect, will become harmful when the faulty attitude is taken. The question is frequently propounded, "why is the standard of the health of women so markedly below that of previous periods?" A little careful reflection upon the matter in hand will help solve the problem. In railway and private



FIG. 3.—The ordinary faulty manner of sitting with pelvis tilted so as to permit the viscera to gravitate into its cavity with the added weight of abdominal wall. Adjust a long corset-splint, secure it at the waist, and note how its nether extremity would encroach upon and crowd the abdominal structures down upon the pelvic organs.

carriages, places of amusement, and in our homes, the seats present a notable contrast to the simple rigid patterns approved by our predecessors. Indeed, it requires constant watchful striving to resist the evil inclination to lounge, which the present style of seats urges upon the occupant. As weights naturally incline to the centre of gravitation, just so surely will

habitual faulty reclining engender and perpetuate downward displacement of the pelvic structures. When we take into careful consideration these physical principles in connection with the fact that, in the aggregate, a large proportion of women's time is spent in sitting or reclining with the body wrongly positioned, it is no longer a wonder that pelvic maladies are so exceedingly prevalent with them, and that their sufferings prove so obdurate, so long as the causative influences are constantly in force.

We have next to consider posture in standing, and its relation to the health of women. This attitude is pre-eminently one of activity. Every one has realized that the effort of standing motionless is soon followed by a sense of uneasiness which is speedily merged into positive suffering unless relief is sought in muscular action. The fundamental physical principles making activity indispensable to the enjoyment of the erect posture have already been alluded to, and we may now go a step farther and notice that nature's requirements are but imperfectly complied with by the mere muscular activity that is necessary for the maintenance of uprightness sufficient for locomotion.

It is demanded that the muscular play shall be symmetrical, or in other words, for the preservation of that graceful bodily poise (without which the healthful equilibrium of the general structures is impossible), it is necessary that the action of any set of muscles be harmoniously responded to by the action of reciprocal muscles. When undue demands are continually made upon the muscles of one side of the body, while the correlative muscles on the opposite side are permitted to remain comparatively lax and inert, the result is not simply a loss of graceful outlines and physical beauty, but a more important and deeper wrong is wrought; for this depraved physical bearing signifies that the normal equipoise of hidden structures is to a corresponding degree destroyed.

The firmly erect human body, with head finely poised, the whole outlined in a series of graceful curves, is everywhere an object of admiration; while, on the other hand, the slouching attitude instinctively arouses aversion. When we carefully analyze the origin of these intuitions, we find that they do not emanate from our innate love of the beautiful nor from the common belief that physical perfection suggests moral worth,

for we know that this harmony is by no means uniform or reliable. The approval we bestow upon a noble physical bearing is born of that subtle sensibility which prompts us to accept the correctly poised body as an index of a sound, happily conditioned physical organization. Among the lower animals, as well as in man, the slouching, cringing position is significant of physical degradation or suffering. Its voluntary assumption has, in all lands and from time immemorial, been accepted as denoting humiliation, and we believe this expressive act to be based upon the fact that, not only does distress of mind or body cause us to cringe involuntarily, but protracted stooping, accomplished through too long effacement of the spinal incurvation (notably the lumbar), imposes structural debasement throughout the body. This postulate becomes more logical when viewed from an anatomical standpoint, for it is not difficult to demonstrate that the health and physical integrity of all the vital organs are seriously impaired through an objectionable manner of posturing. In looking at a lateral section of the human body, the truncal tube will be seen presenting several distinct curves which are maintained by and correspond to the curves of the spinal column. A series of comparisons of similar sections in different bodies will show that this spinal curvature varies considerably in its antero-posterior extent. It is also seen that the incurvation is less pronounced when associated with deficient muscular development. Appropriate test measurements show this variance to be primarily manifested in the lumbo-sacral region of the spine. When the muscles of the body are finely developed and the texture firm, the lumbo-sacral prominence is found advanced to, and often projects in front of the line of the pubic symphysis, while the sacral arch is so abrupt as to position the os sacrum nearly at right angles with the axis of the body (see Fig. 4). If, on the contrary, the body be imperfectly developed, the lumbo-sacral prominence is more retired and the pelvic arch less acute, while the contour of the entire spinal column resembles in its curvi-linearity the infant spine. That which is demonstrated by the cadaver agrees with our every-day study of the living body.

The more of thoughtful observation is devoted to this subject the more abundant and convincing will be found the evidences of reciprocal relation between a well-arched, perfectly bal-

anced spine, and the health, strength, and suppleness of the body. Did space permit, good reasons could be adduced to show why this reciprocity in development should exist; as, for instance, the habitual maintenance of correct spinal curvature secures a greater chest development, and, through the consequent deepened respiration, the vital organs are proportionately benefited. Illustrations might profitably be extended, but our efforts must be confined more particularly to the subject properly before us. It has already been remarked that the utero-ovarian organs are placed beneath the overhanging arch of the sacrum. To more clearly present our argument, let us refer to a diagram outlining an erect female body (see Fig. 1). An imaginary line dropping from the crown to the instep would mark the axis of the body, and it is well to notice the relation to it of the various organs and principal bony structures. After the spinal column recedes from it at the cervical vertebræ, it again approaches and crosses it (where the lumbar curve is well developed) about the first lumbar vertebra, to again recede and leave it abruptly at the sacral prominence. The sacrum extends backward nearly horizontally for about three inches, and then sweeps downward to the coccyx. It will also be seen that the axis of the body passes through the pubic symphysis. Normally, the generative organs are situated wholly behind the plane of the truncal axis, and so long as the pelvis is correctly poised, they are secure from weights and shocks from above, for the centre of gravitation will then be the pubic bone (pubic symphysis, Fig. 1, 1), and if in imagination the direction of a diaphragmatic impulse is followed, it will be seen that its direct force is expended upon the lower third of the abdominal wall with a reflex impulse in the direction of the sacral hollow; also when all the parts are normally situated, this rebound wave imparts a final upward fluctuant motion to the uterus, beneath which it is secondarily expended. Let us now consider what changes are wrought through a slight straightening of the lumbar curve. In the first place, it should be understood that a well-defined co-ordination of degree is maintained between the several spinal curves; consequently, the flattening of the lumbar arch incurs a corresponding effacement of all the others. When the lumbar vertebræ recede from the truncal axis, the

more remote dorsal vertebræ advance, and there is a proportionate straightening of the trunk, which gives that ungainliness of figure characterized by straight back, round shoulders, protruding chin, retracted epigastrium, pendulous or prominent hypogastrium, etc. (see Fig. 5). Reverting to the pelvis, we notice there is a corresponding perversion of its relative bearing. The ileo-femoral articulations supply the pivotal centre of pelvic oscillations. As the sacral prominence recedes from the line of the truncal axis, the coccyx moves in an opposite direction; hence the sacrum becomes more perpendicular, and its arch no longer affords sufficient protection to the uterus, which, with its appendages, has been made to approach the current of downward forces. As the sacrum rotates backward, the os pubis is elevated, and the plane of the pelvic inlet becomes more horizontal.

It is plain, then, that in obedience to the law of adjustment, the receding of the lumbar vertebræ straightens the truncal tube and also destroys healthful equilibrium of the structures throughout the entire body: the movable visceral organs are no longer in a state of harmonious buoyancy, but are inclined to sag; this condition being fitly described by concurrent sensation of dragging and weariness. The backward tilting of the pelvis favors precipitation of superincumbent textures, and diaphragmatic impulses, directly into its cavity, and naturally the generative organs suffer. Gradually the subtextures yield, and little by little the mobile pelvic organs descend en masse toward the outlet.

It is hardly necessary to enumerate the manifold faults and vocations causing this truncal debasement, since, with a little contemplation, they are readily suggested.

Among the working classes, we have sweeping, ironing, sewing, running the sewing machine, standing behind counters, etc. Women more fortunately circumstanced usually assume a faulty method of sitting, through carelessness or indolence, and sometimes, through silly sentimentality, will adopt, while walking or standing, a position resembling that of the kangaroo.

Another fruitful source of pelvic suffering is the high-heeled shoe, which while worn destroys the normal axial relation of the structures throughout the body; the knees bend, the

shoulders stoop, and in order to maintain erectness, the trunk recedes at its lumbar region, which change tilts the pelvis in the manner we have just been observing. It is absolutely impossible for a delicately organized woman to wear this form of heel without incurring disastrous consequences. The difference of outline between Figures 4 and 5 illustrate this principle. These portraitures are faithful outlines of two photo-

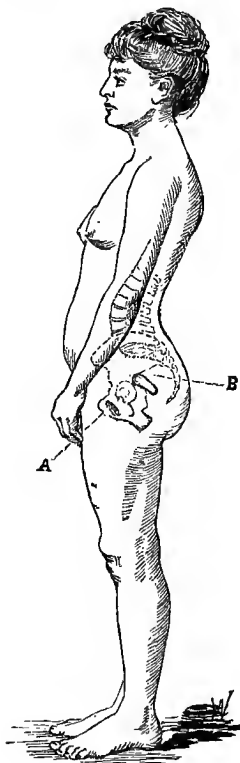


FIG. 4.

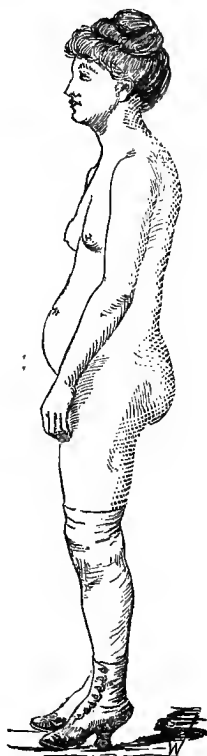


FIG. 5.

FIG. 4.—Illustrating correctly balanced erect body. A, symphysis pubis; B, indicates position of uterus as it reposes beneath the sacral arch.

FIG. 5.—Debased attitude in standing.

graphs taken from life. It will be seen that in Fig. 4 the firmly erect posture was assumed. For Fig. 5 the model was allowed to stand motionless for a few minutes, and then requested to adopt whatever attitude her sensation of fatigue prompted.

A careful comparison of these two delineations will convey a clearer conception of the matter than the most exhaustive verbal description.

As the pernicious effect of high-heeled shoes upon the health of women has already received considerable attention from the profession, it would be but supererogatory to take up the matter more fully, but there is one point I desire to mention, since it has proved to me both interesting and perplexing. It has been taught, and the view very generally accepted, that the incurvation of the spinal column is exaggerated when the body stands upon the inclined plane provided by this form of heel, and casually this deduction appears logical. Careful observation, however, compels a dissent from this conclusion, for instead of an exaggeration of the truncal curves, I find more or less effacement of them, except in very short-statured persons, in whom the elevation of the heels does seem to effect a deepening of the lumbar curve with a corresponding rolling forward of the pelvis. I am unable to explain this discrepancy between the tall and short-statured, but simply present the facts as found. We must discriminate between the primary and secondary conditions of this induced deflection of the truncal contour. At first, before the constrained position has fatigued the muscles, the curves of the body may be more pronounced, and the strained physical bearing is one suggestive of assumed loftiness. When, however, the primary sensations give place to weariness, the opposite condition (as delineated in Fig. 5) succeeds, and this result is the more abiding one.

Since this ridiculous caprice is being gradually discarded, it is unnecessary to dwell more fully upon the matter; unfortunately, however, this index of conspicuous vanity is only one of the many prejudicial contrivances which the tyranny of fashion is forever inflicting upon women.

We have now called attention to the most salient features of this part of our subject. It is a deeply interesting one; the principle, constant and far-reaching. To deal with all the points directly bearing upon this topic would far exceed the limits of our undertaking. The initial thoughts here presented should be properly regarded as indicative of the greater possibilities, and we hope that the suggestions will

awaken deeper interest in the minds of others regarding this and kindred important contributing factors to the ills of women.

As previously intimated, this subject is one of twofold interest from the fact that bodily posture is not only a fruitful source of evil, but it may, with intelligent adjustment, be employed as a potential remedial agent. It is true that for many years there have been physicians who have advocated and made use of bodily posture as a therapeutic measure in gynecology, but from all that has been recorded regarding their methods, we are persuaded that the underlying principle was not fully and definitely comprehended. When an author commends the dorsal posture for the relief of anteversion or ante-flexion of the uterus, we cannot escape the conviction that his views concerning the philosophy of postural treatment are very short-sighted. The total weight of the uterus is so insignificant that, were it possible to suspend this organ at the point of bending, the mere weight of the fundus would secure no appreciable degree of straightening. On the contrary, we are justified in claiming that ante-flexion is aggravated by decubitus, for the exudate that holds the uterus thus crippled is the product of congestion, and we have demonstrated that the dorsal position cannot be maintained without incurring blood stasis. On the other hand, too much has been claimed in the way of mere mechanical results from what is commonly known as "knee and chest posturing." We know with what positiveness certain celebrated authorities have assured us that this posturing will immediately restore a retroverted uterus to its normal position, and we grant that in certain cases this result will follow, but in many others the pelvic organs are simply urged upward, and the fundus of the uterus appears to impinge against the sacral prominence, and refuses to fall forward as predicted. Of course, this failure would be expected ^{but} did adhesions exist, and it is often experienced where there is an absence of adhesions, and where all instructions regarding the intromission of air within the vagina have been faithfully complied with. From careful experimentation, I am convinced that the efficacy of atmospheric pressure within the vagina as a repositioning factor in the genu-pectoral posture is over-estimated. When, however, deep respiration is performed

while in the knee-and-chest posture, a very powerful upward force is exerted upon the pelvic structures which aids greatly in dislodging the retroverted fundus from beneath the sacrum, and even when adhesions exist, this practice, when persisted in, will contribute much toward their absorption and ultimate freedom of the parts. Forced respiration while in this posture will also expedite the withdrawal of surplus blood from the pelvis, and affords our most effective hemostatical measure, providing the strength of the patient is sufficient for the necessary effort. It should be borne in mind that, while the knee-chest posture is a most valuable adjuvant in the treatment of pelvic prolapsions, the mere elevation of these organs should

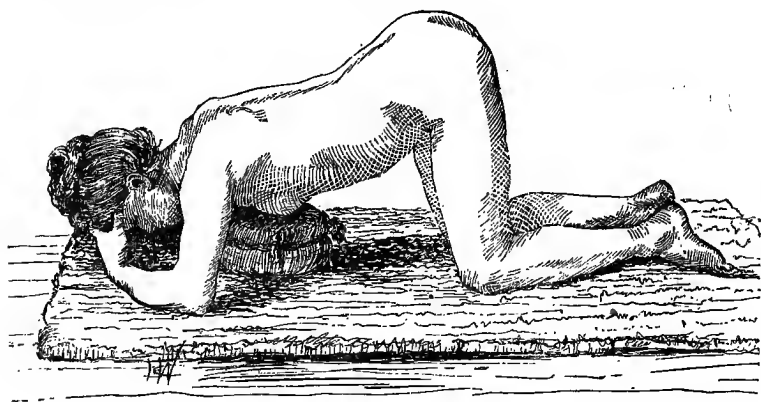


FIG. 6.—Genu-pectoral posture.

not be regarded as the prime or chief end to be attained; we should keep most prominently in view the true philosophy of this procedure, viz., the removal and prevention of blood stasis which in pelvic suffering constitutes in the majority of cases the originating factor, and is in all a perpetuating one. When this posture is frequently assumed, the blood-vessels are disgorged, and their wonted resiliency returns. Consequently, as healthful circulation and nutrition within the textures are resumed, the parts regain their normal tonicity.

For the attainment of satisfactory results from posturing, it is necessary that instruction regarding it be explicitly given, intelligently arranged, and faithfully observed. Simply to direct a patient to assume this posture for a certain time at stated in-

tervals is not sufficient, and will rarely meet with judicious compliance. The position and condition of different parts of the body should be definitely depicted, and the effects which various corporal posturings would naturally exert upon these structures plainly illustrated; the hour and length of time specified, and an implicit fulfilment of directions exacted. First, all restricting garments are loosened or removed; the knees, slightly separated, are placed squarely upon a rug or cushion on the floor, and the body allowed to fall prone upon the elbows with the forehead resting in the palms of the hands (see Fig. 6). The hips should be kept as nearly as possible directly above the knees; the back concave, and the abdominal muscles lax. Let this posture be occupied from five to ten minutes three times a day, and the semi-prone position taken for an hour in the middle of the day directly after practising the genu-pectoral exercise. The patient should also be instructed to perform deep respiration during the time the hips are elevated, for the reason already alluded to: that deepened respiration in this position draws the movable visceral structures forcibly upward, and at the same time effectually exsanguinates the pelvic textures. After a fatiguing walk, or when dragging pressing sensations are experienced, when wearied with standing or sitting, a few moments spent in this posture, followed by a period of rest with the body semi-prone, will afford great temporary relief, and when this procedure is intelligently followed, will do more in the aggregate toward restoring normal tone to the enfeebled pelvic organs than the most skilful professional manipulations. Every form of downward displacement of any one or more of the pelvic organs, as well as hyperemia, whether active or passive, of ovaries, uterus, vagina, or rectum, in short, any condition which is aggravated by depression of the pelvis is correspondingly improved by elevation. In some instances, daily duties preclude the observance of this postural practice; but it should be strenuously enjoined upon retiring for the night, for it is obvious that a few hours spent in the semi-prone position after the parts have been fully relieved of all engorgement, will accomplish much toward the recuperation of the overtaxed tissues. It is not unusual to find patients who object to the effort required in taking this position, and who, becoming discouraged, abandon it before practice has accustomed the muscles to the

performance of this new action. To obviate this difficulty, we may make use of mechanical assistance in supporting the body. Formerly I commended a swing apparatus; but this is not only too intricate, but is disposed to exert pressure over the femoral vessels and nerves, causing very unpleasant sensations of numbness and formication. A simple and restful means of support is easily procured by placing a low foot-rest or a pile of books of sufficient height to receive the weight of the upper portion of the trunk. The rest should be placed beneath the upper part of the thorax in such a manner as to impede full respiration as little as possible. When the body is thus sustained, the patient is enabled to retain the position with comparative ease, and there is also less disposition to fix the abdominal muscles rigidly. Usually, during the first efforts a temporary fulness and aching of the head is experienced, but with inurement this subsides. An opportune application of this feature may be made, since it aptly illustrates the principle we desire to inculcate. The cerebral structures are really no more profoundly disturbed by gravitation than are the pelvic textures, but the higher nerve endowment of the former forces a keener recognition of the evil. In the management of every form of pelvic derangement, the part played by posture should early be taken into consideration. It is reasonable to suppose that pelvic suffering complicated with congestion can be ameliorated by elevation, just as an inflamed foot or hand is soothed by similar posturing. Owing to the preponderant sensory nerve supply, the benefit afforded the extremities may seem greater, but the actual good accomplished predominates in the more vascular region, and where the spongy tissues yield comparatively insignificant peripheral support to the over-distended vessels.

Rectal hemorrhoids afford an excellent opportunity for studying the effect exerted by posture upon vascular tissues. When a patient thus afflicted lies upon the back, the piles may be observed tense, livid, and painful; when, however, proneness is assumed, and the hips slightly raised, the tumors disappear immediately, and the injected condition of the mucous membrane vanishes. Let the former position be again taken, and in a moment the blood redistends the tissues. This visible phenomenon demonstrates conclusively the changes wrought in the adjacent hidden tissues through bodily postur-

ing. A little reflection will convince any one acquainted with physiology that it would be difficult to name a single ailment to which women are liable that is not affected for good or evil by the statical process. Genital catarrh, displacements, congestions, hemorrhages, etc., all hinge directly upon the principle, and success in the management of these anomalies will never attend our ordinary therapeutic resources so long as gravitatory influences are disregarded. In view of all that has been adduced, it seems hardly necessary to refer to the important part which gravitation plays in post-partum involution of the generative organs. It must be readily apparent to every one that during convalescence from childbirth, the dorsal decumbency is highly injurious. At this time, the uterus and adnexa are bulky, soft, flaccid, and extremely vascular, conditions which render the parts especially susceptible to gravitatory influences. Reason would at once suggest the propriety of maintaining the semi-prone position during the period of involution, and if this sanitary principle be observed, we will find that the enlarged spongy structures not only return more speedily to their normal dimensions and tonicity, but the organs will more surely regain their natural conformation and position. It is a just and reasonable inference to hold that the subinvolution and prolapsion so commonly following upon parturition are the natural sequence of the popular, yet harmful, practice of lying upon the back during convalescence. Many find it difficult to account for the great number of young women, endowed by nature with excellent physiques, who yet are suffering from utero-ovarian displacements and other pelvic complications. The writer has taken pains to obtain facts and data upon this question and the origin of this misfortune is no longer a mystery when the habits of school-girls are carefully studied. The majority of women will recognize the following portrayal: The body tilted backward so as to rest upon the sacrum in one seat, the feet placed in another chair, with the knees drawn up toward the chin to furnish a convenient rest for the books or writing materials. From personal observation and reliable statements of many students in the various female schools, I know that this attitude is quite generally adopted by girls and young women during the study hours spent in their

rooms. With the body in this position, the pelvic viscera would of their own inclination fall backward and sink in the direction of the least resistance; when, however, we add to the postural evil, engorgement, superimposed weights, constriction and crowding of garments, etc., it would be marvellous if any girl customarily occupying such a position should escape the penalty—pelvic displacements and associated disorders.

It is not necessary to call attention to the fact that thus far we have been dealing with only one of the numerous causative influences in gynecic anomalies, for it is an every-day occurrence to find these cases complicated with several co-existent contributing conditions which are the direct result of bad personal habits. Take, for instance, constipation, than which there is no more fruitful source of pelvic suffering. It is plain that the forcible expulsive efforts consequent upon this affection unavoidably induce pelvic engorgements, relax the pelvic floor, and naturally crowd the movable structures downward. For the relief of this difficulty, cathartics in every form as well as enemata are quite generally resorted to, the ultimate effect of which ill-advised practice invariably intensifies the intestinal inertia. Probably, ninety per cent of the cathartic nostrums are consumed by women, and the use of the syringe is confined almost exclusively to that sex. Indeed, the reappears to exist in women a deplorable predisposition for self-destroying customs.

The field opened up by these thoughts is a wide and most attractive one for earnest attention, but we must resist the temptation to extend our argument beyond the legitimate province of our theme, and will therefore conclude by once more declaring this essay to be a plea in behalf of a better recognition of the simple practicalities connected with our every-day professional duties. In conclusion, we urge the necessity of studying this and kindred subjects logically that we may comprehend the significance of implied principles in the broadest sense; for without doubt a proper appreciation and opportune application of the natural influences that modify physical conditions is infinitely more desirable than the most skilful exhibition of approved art devices. An overweening confidence in the competency of art-measures alone, has ever been the bane of the profession. The natural trend of the medical mind is toward

the adoption of favorite theories and an unquestioning pursuance of stereotyped measures, to the neglect of more philosophical and efficacious expedients which are presented on every hand for timely appropriation. Furthermore, the fact should be realized that, however zealously our duties may be pursued, they are still imperfectly performed if restricted to the combating of existing anomalies. It is the crowning responsibility of physicians to anticipate and avert suffering by the timely application of well directed measures. To this end it is our bounden duty to enlighten the public mind, as fully as possible, upon common sense, practical affairs, strictly enjoining upon parents, guardians, and teachers the exercise of a well-informed supervision over all matters pertaining to sound physical development.

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